

FIG. 1A

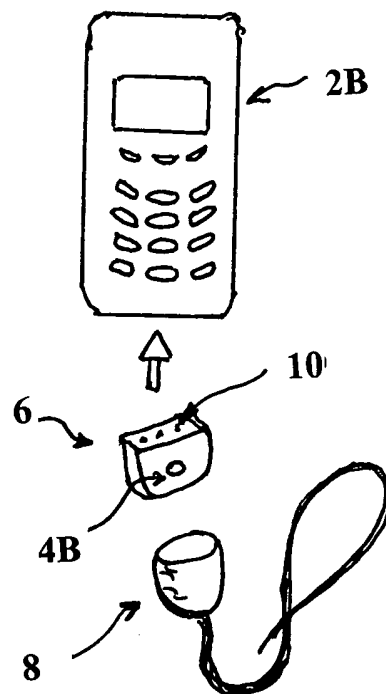


FIG. 1B

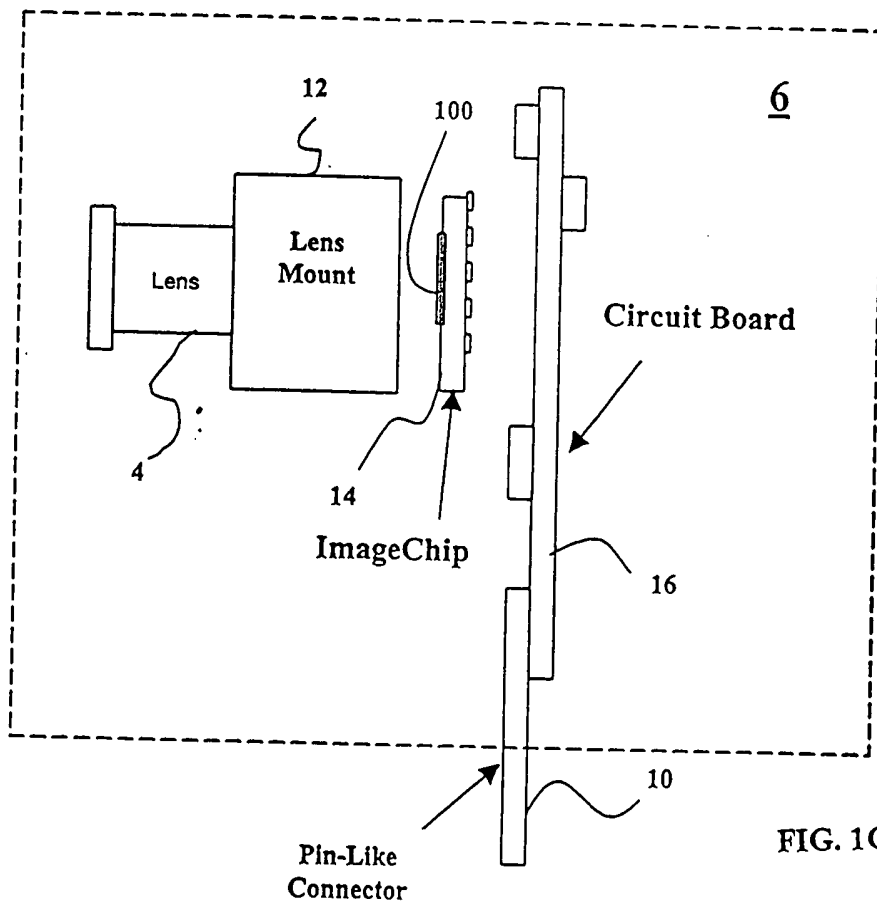


FIG. 1C

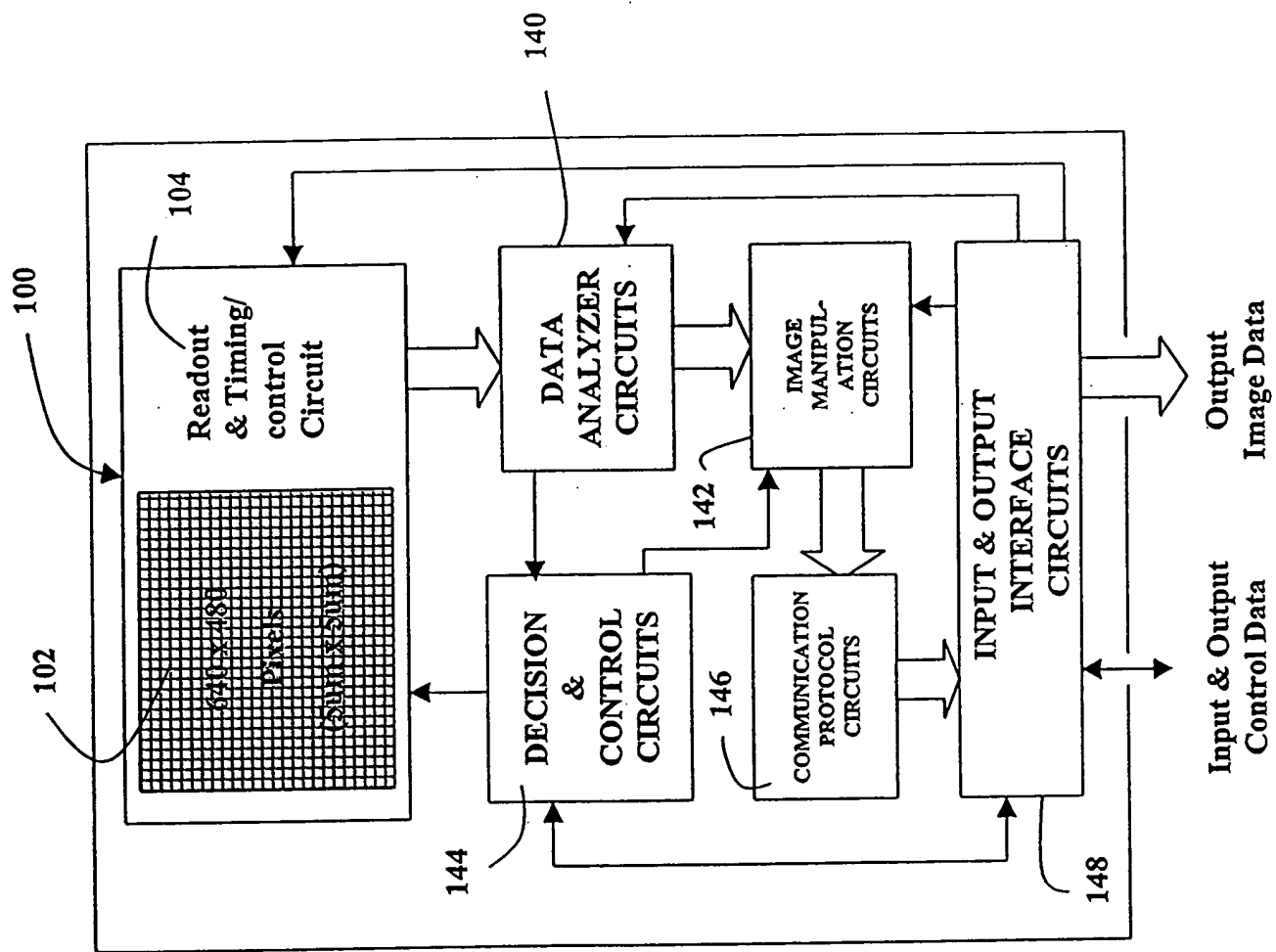


FIG. 2

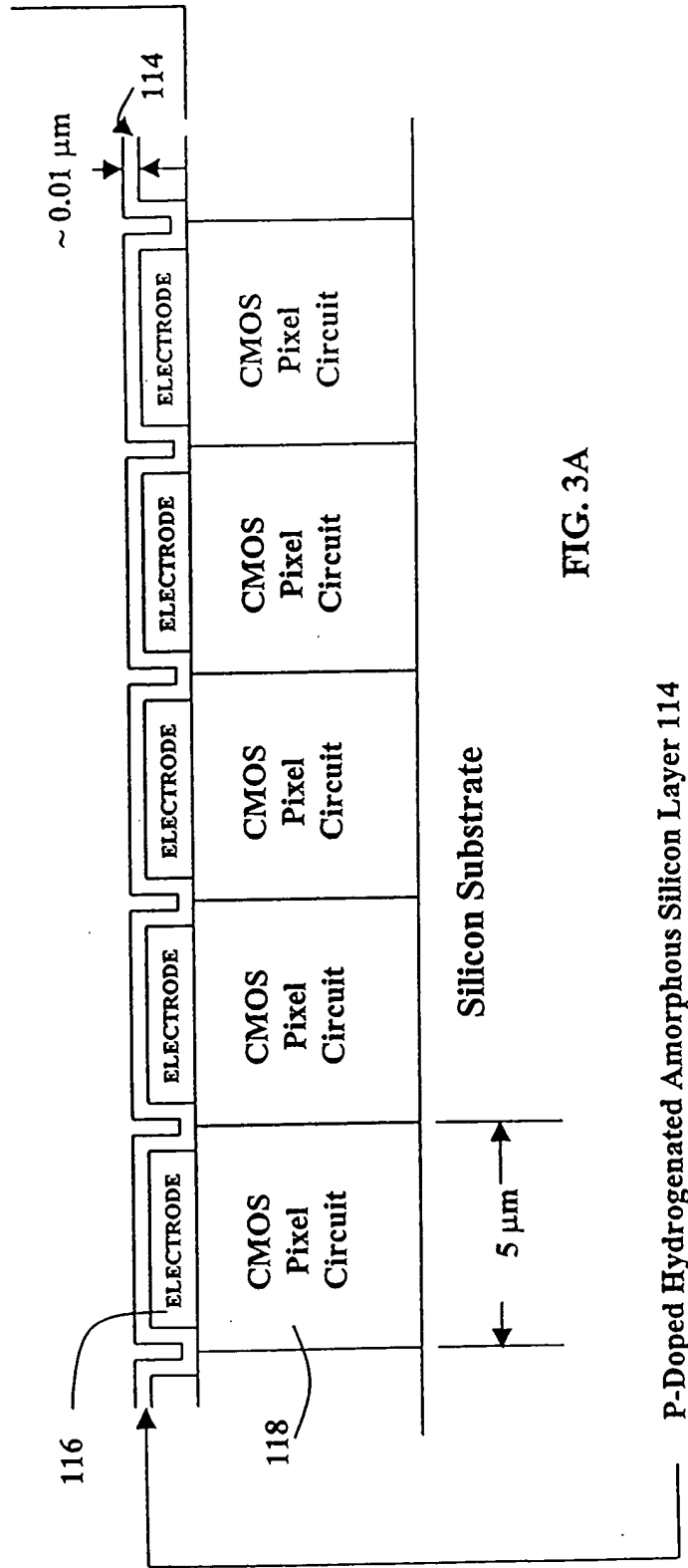
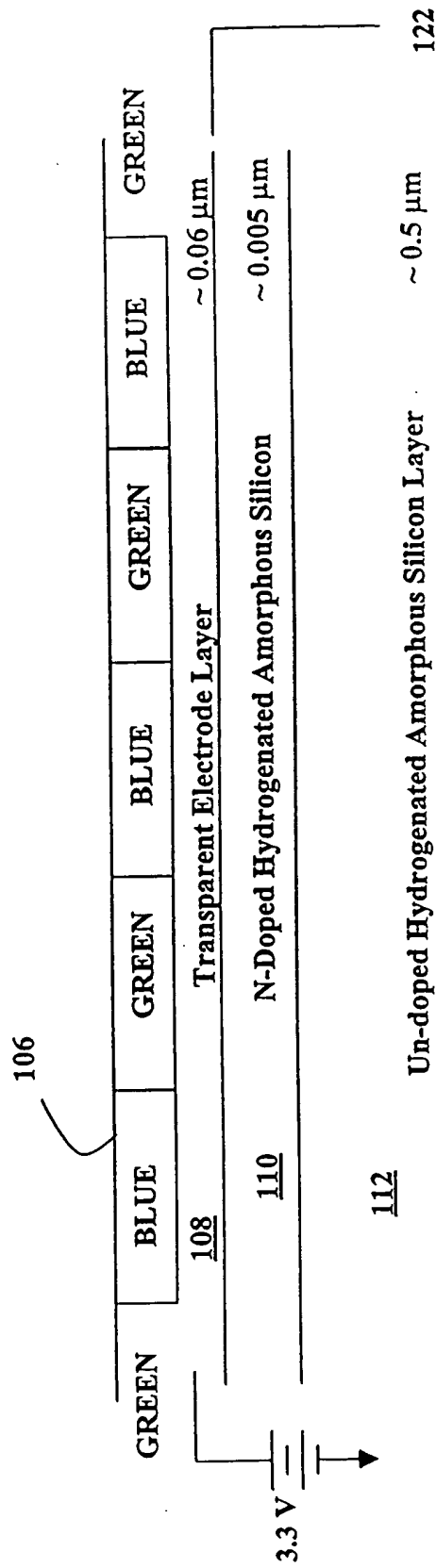


FIG. 3A

P-Doped Hydrogenated Amorphous Silicon Layer 114

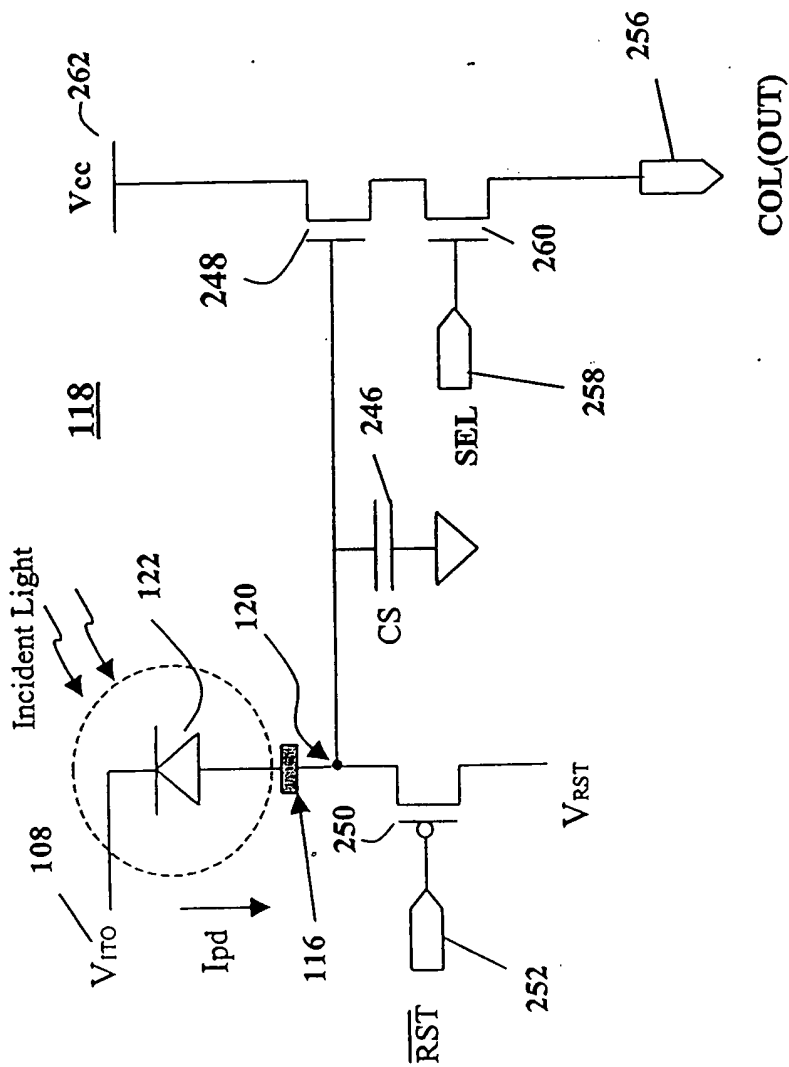


FIG. 3B

FIG. 3C

R	G	R	G	R
G	B	G	B	G
R	G	R	G	R
G	B	G	B	G

POAP Sensor Pixel Cell Array

300

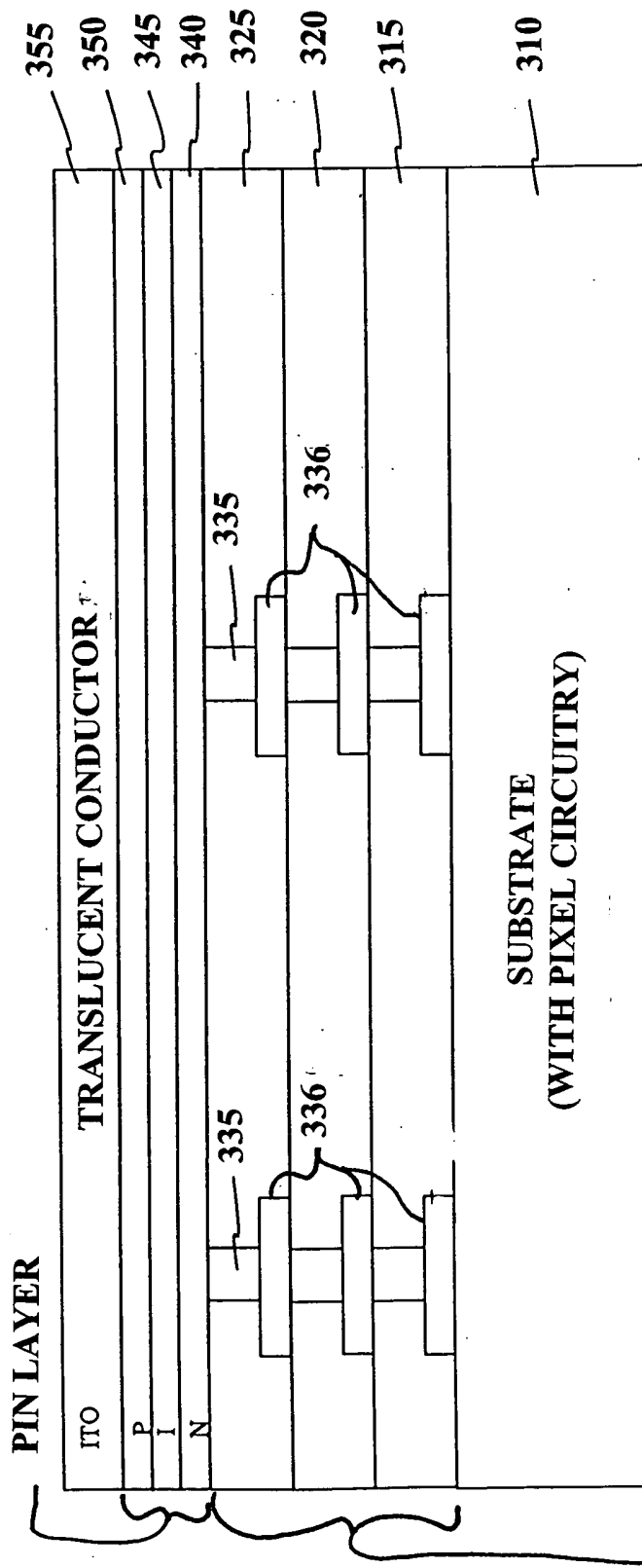


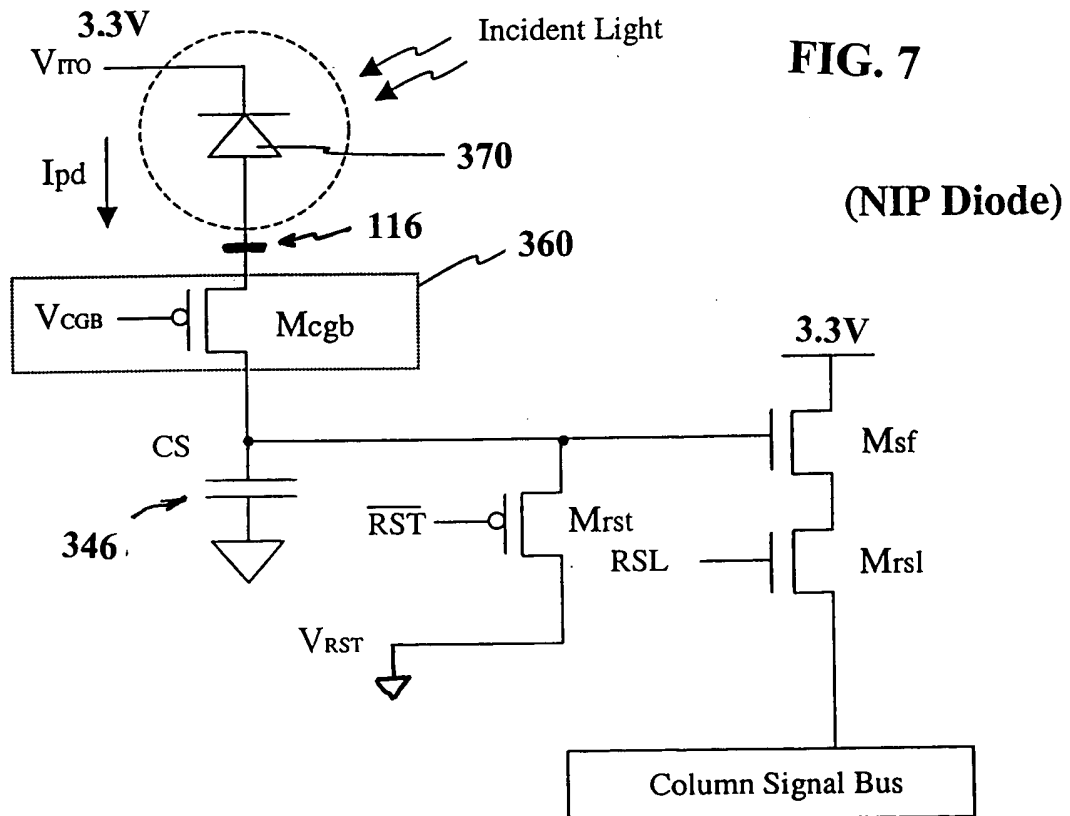
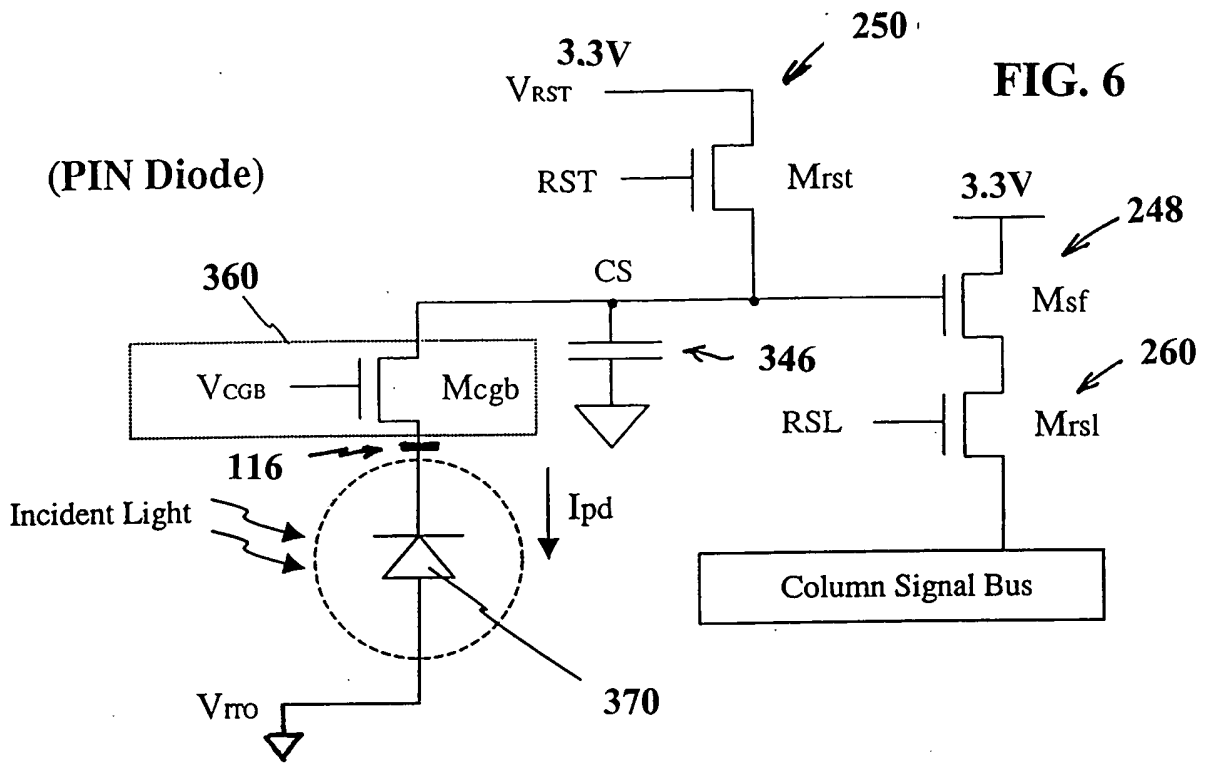
FIG. 4

TRANSLUCENT CONDUCTOR



FIG. 5

Individual Pixel Cell Circuitry



400

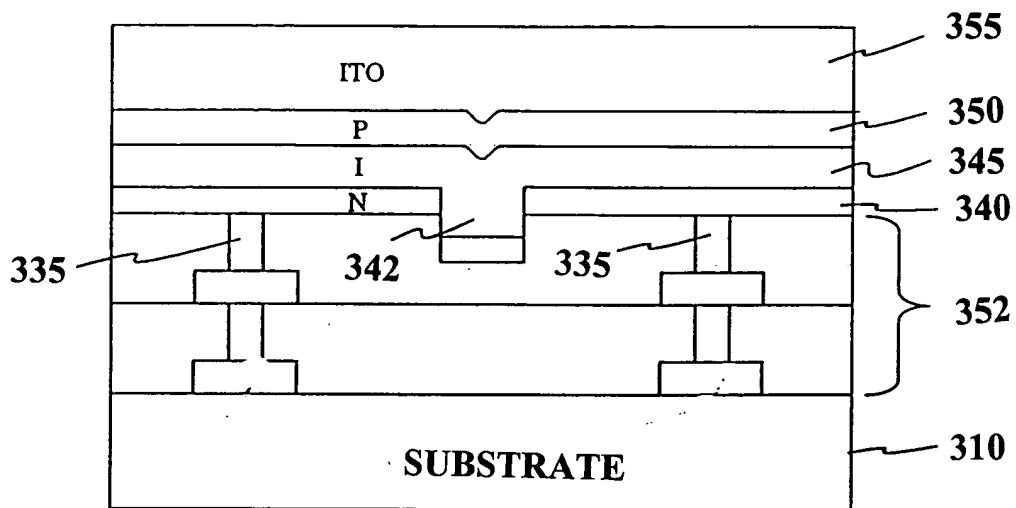


FIG. 8

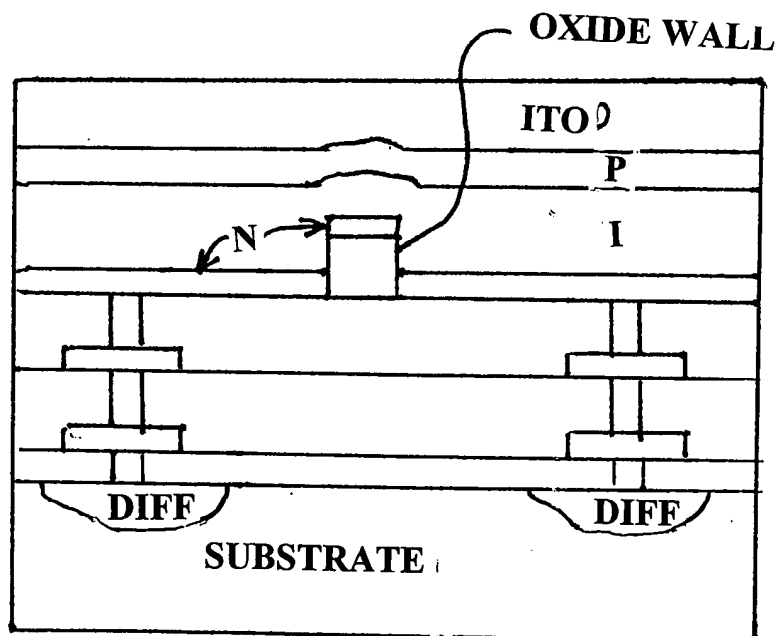


FIG. 8A

500

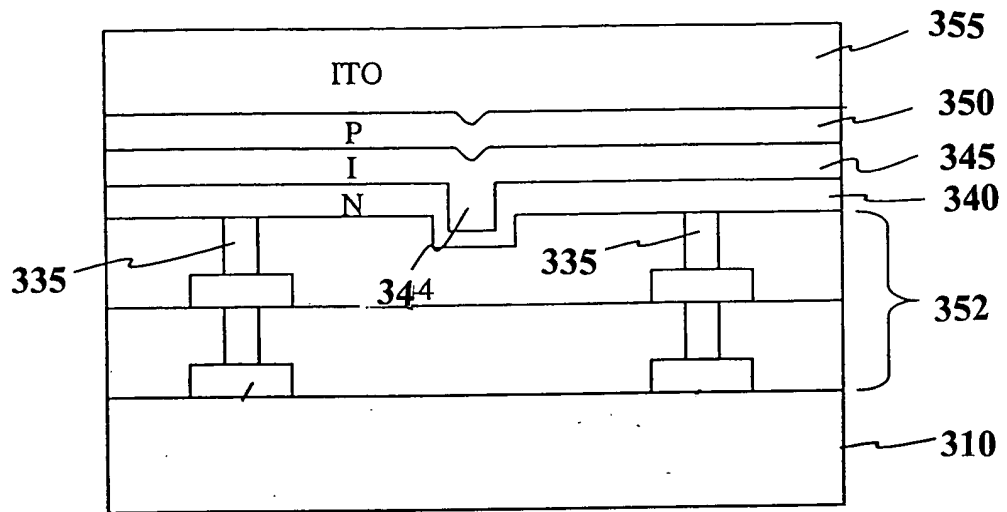


FIG. 9

600

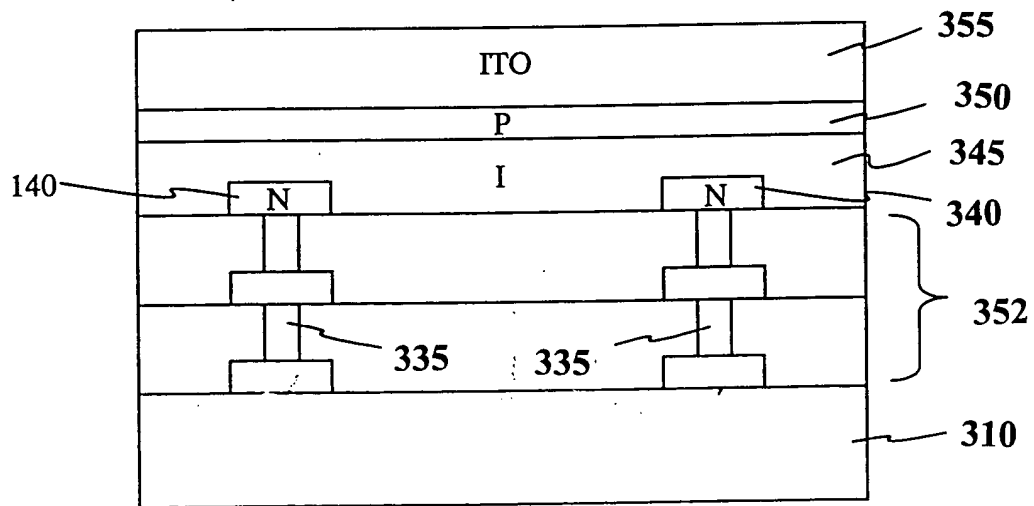


FIG. 10

(PIN Diode)



Individual Pixel Cell Circuitry (Six-Transistor Architecture)

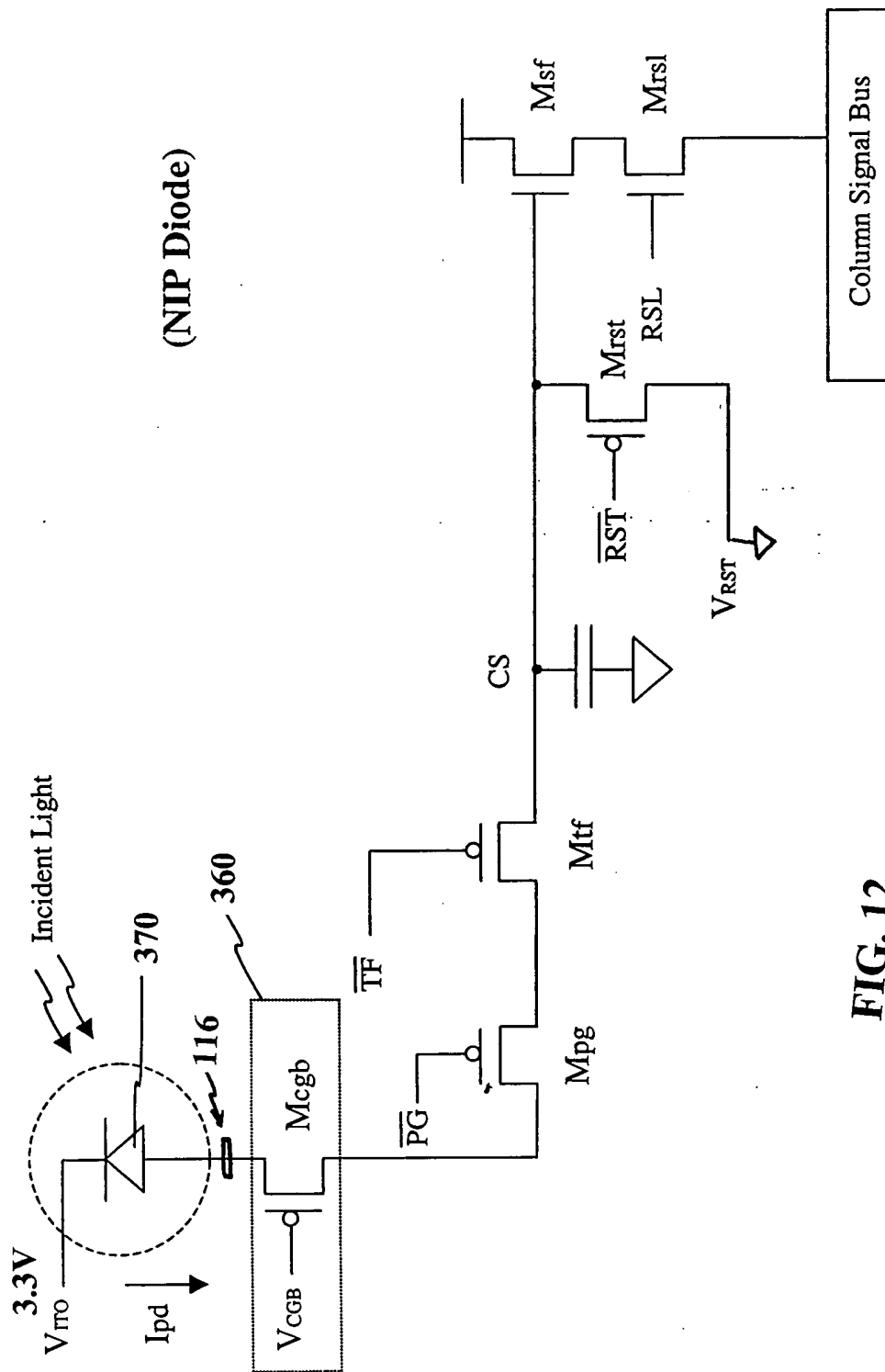


FIG. 12

Alternative Pixel Cell Array And Related Circuitry

700'

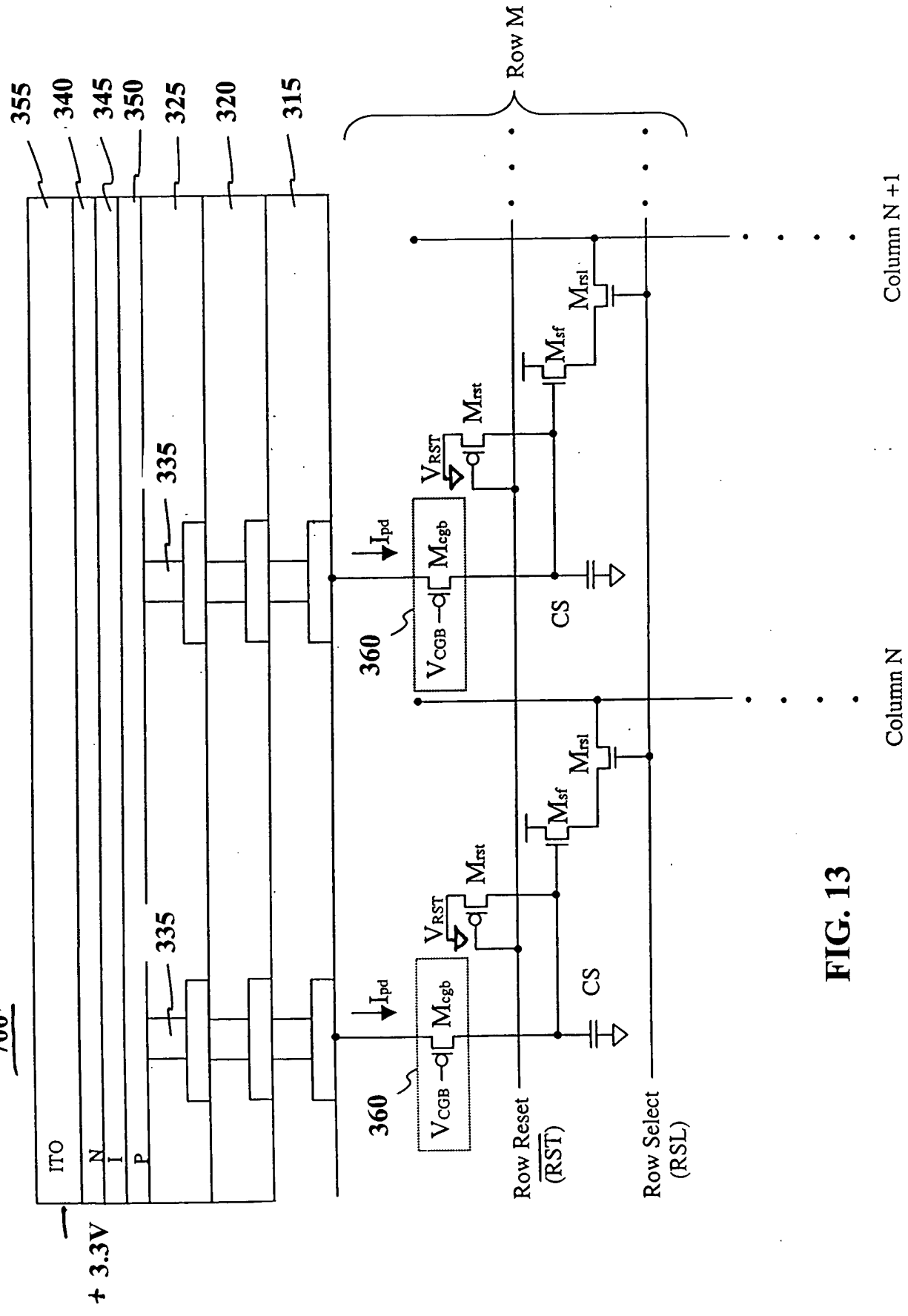


FIG. 13

PBIN Pixel Architecture

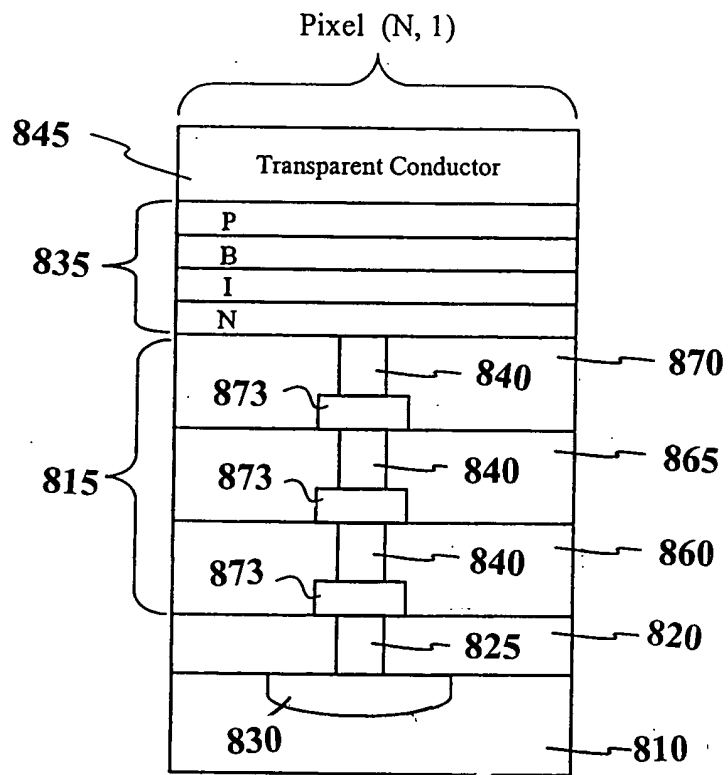


FIG. 15

PBIN Pixel Cell with Metal Pad

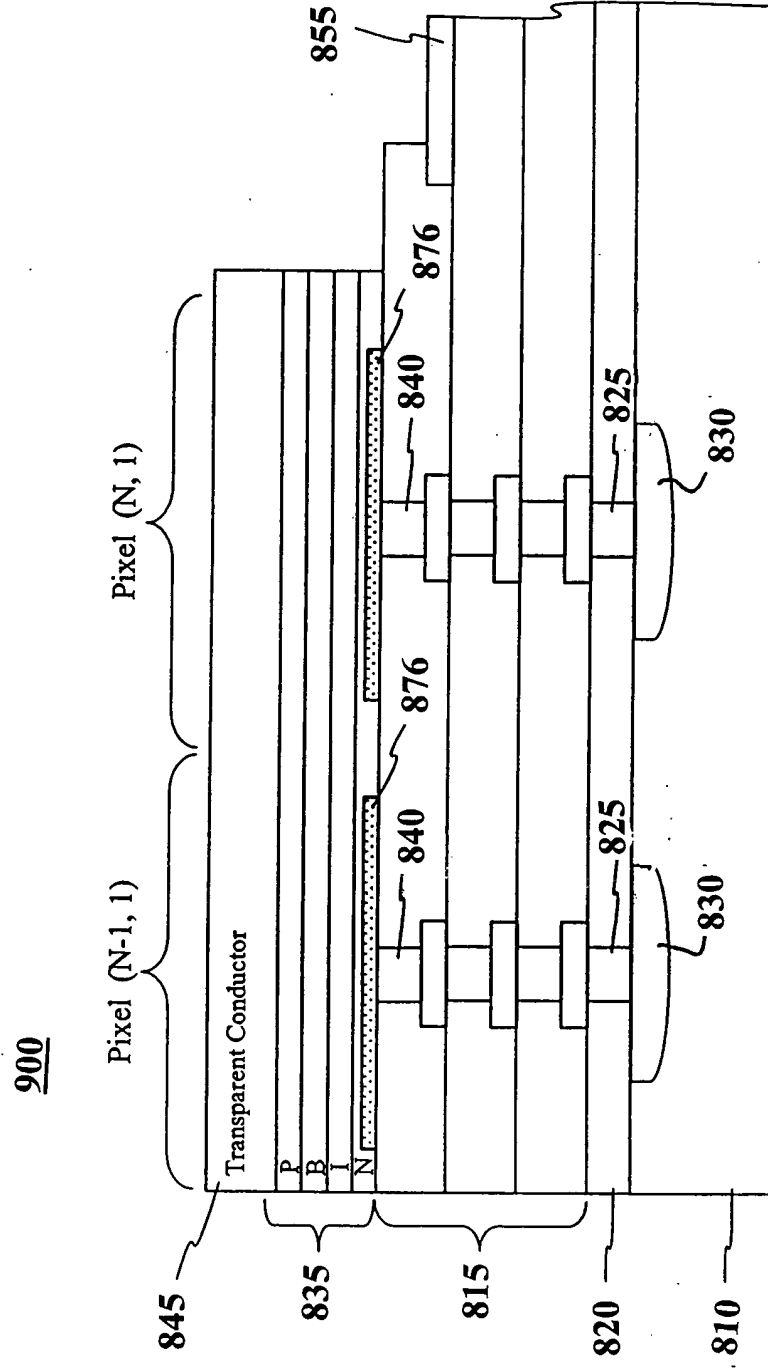


FIG. 16A

PBIN Pixel Cell with Metal Pad (Alternative Design)

950

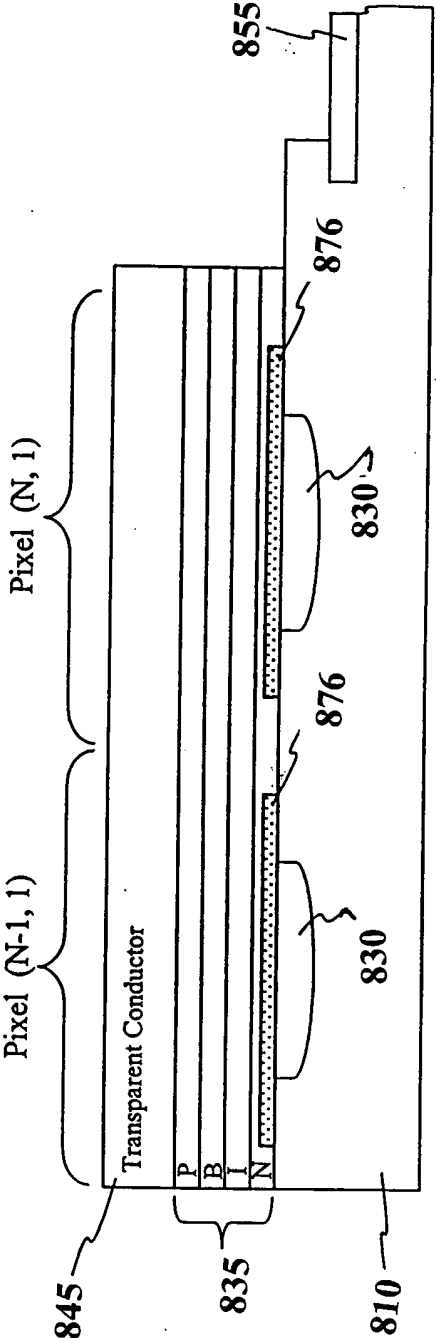


FIG. 16B

POAP Sensor Utilizing Isolated Circuitry Region

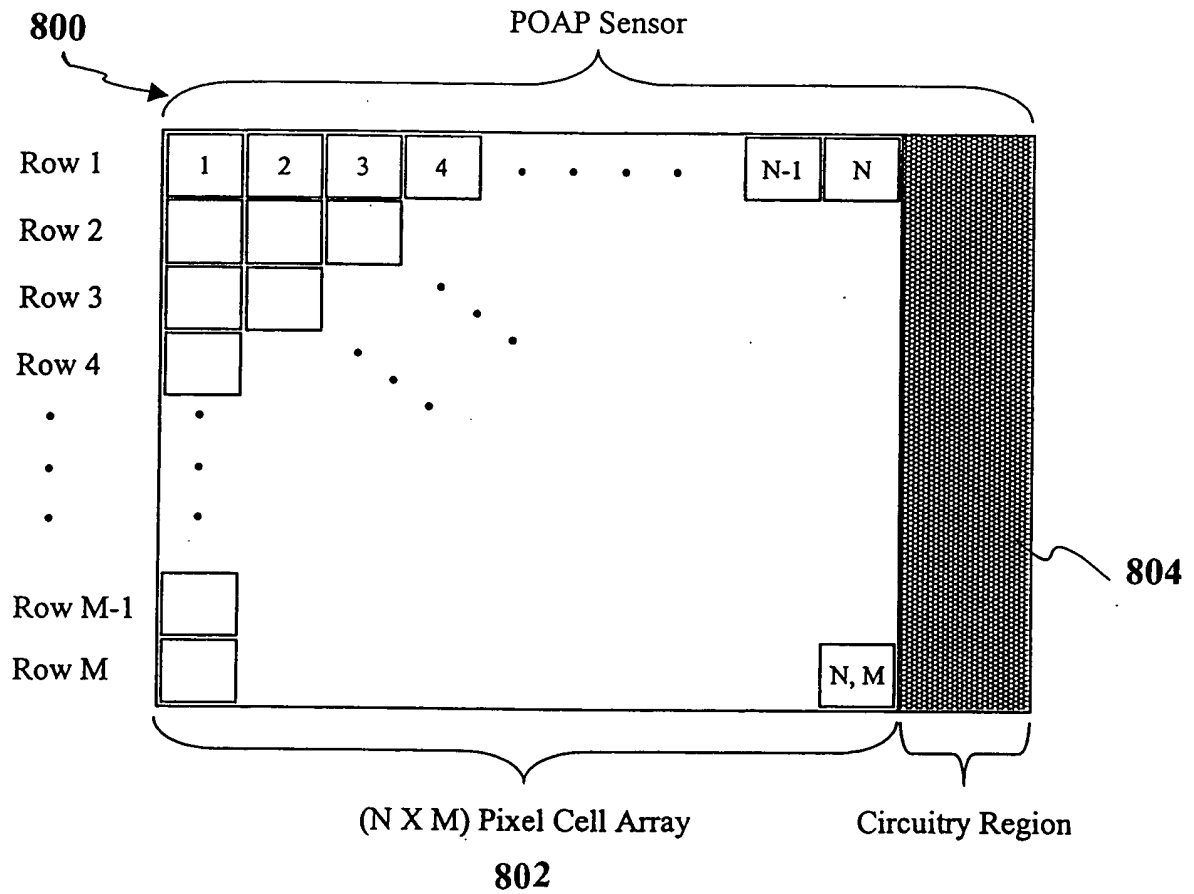


FIG. 17A

POAP Sensor Utilizing Multiple Circuitry Regions

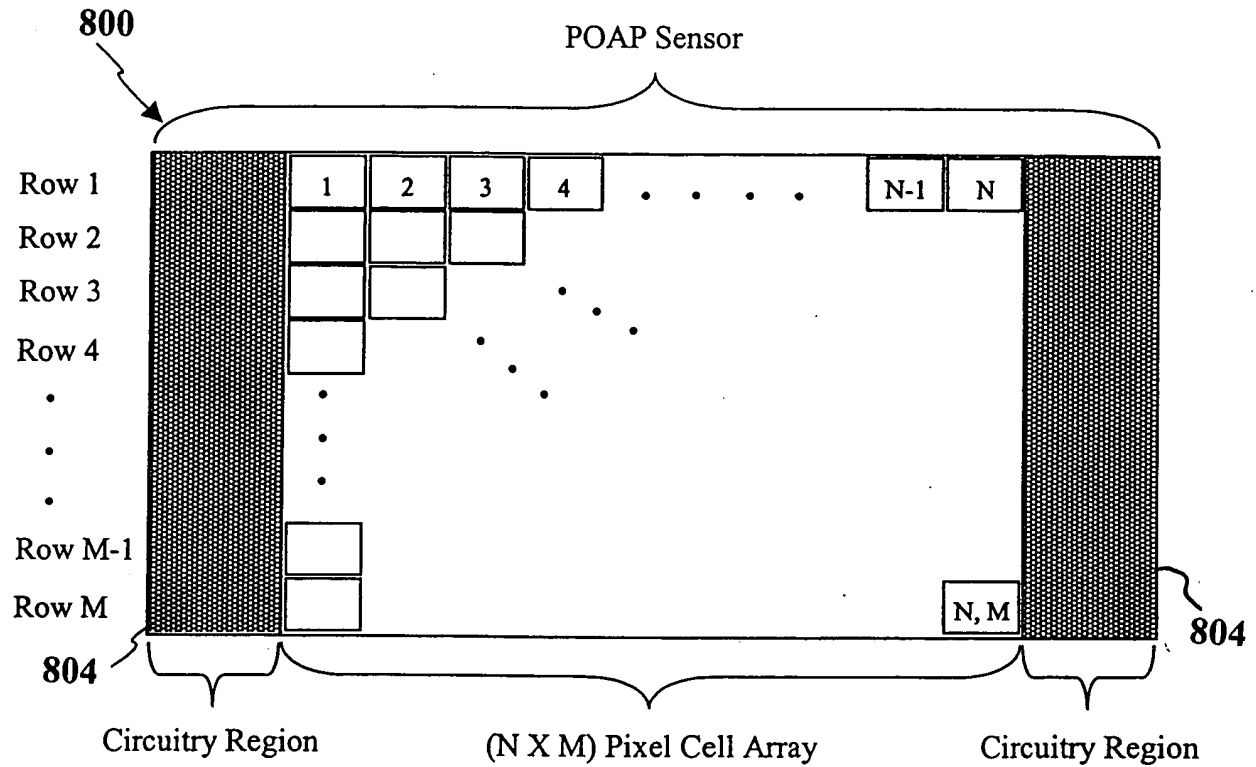


FIG.17B

POAP Sensor Utilizing Four-Sided Circuitry Region

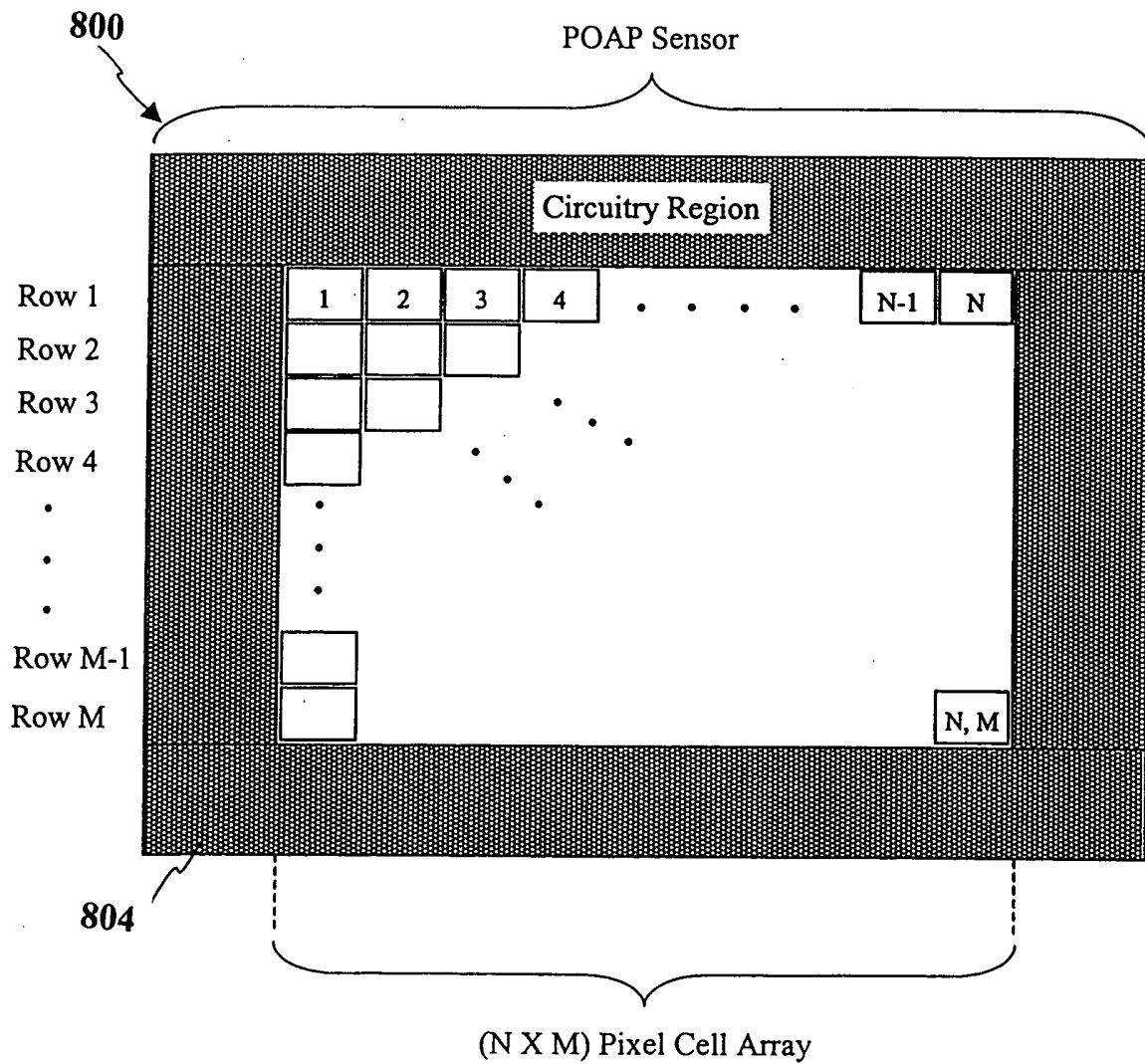


FIG. 17C

NIBP POAP Sensor

1000

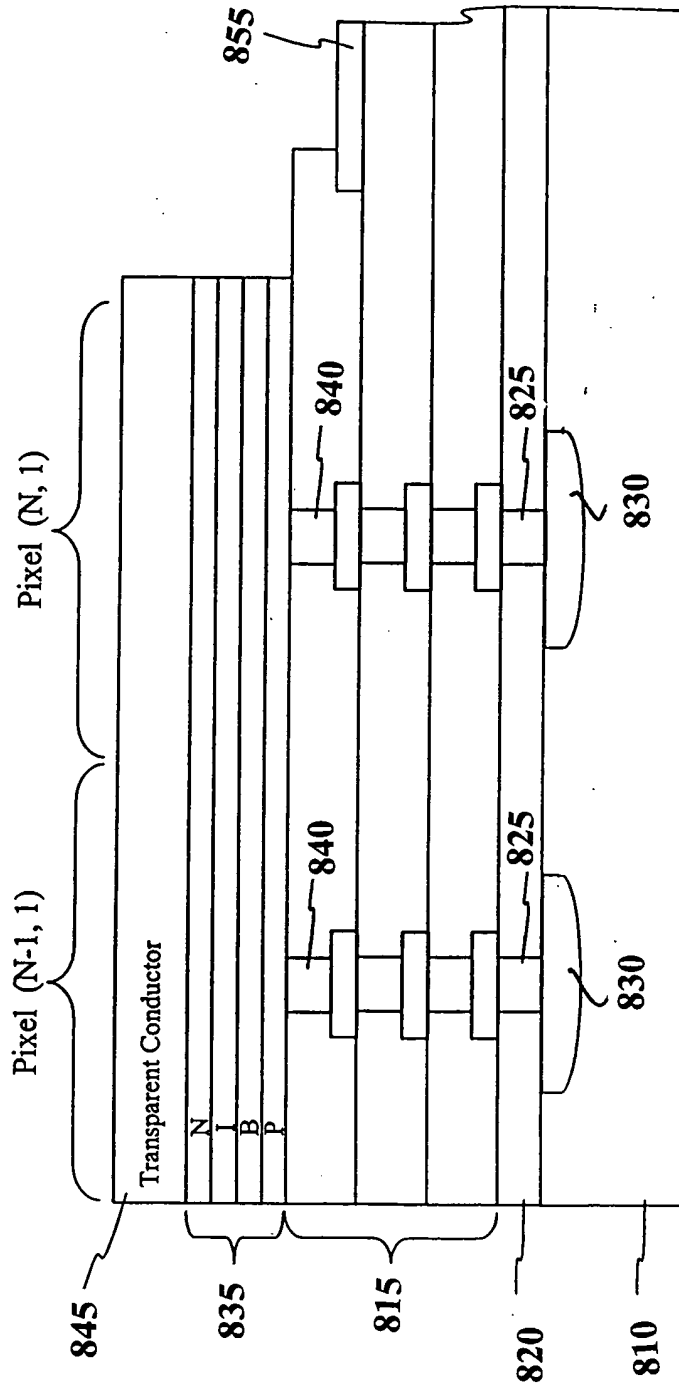


FIG. 18A

NIBP Pixel Cell with Metal Pad

1050

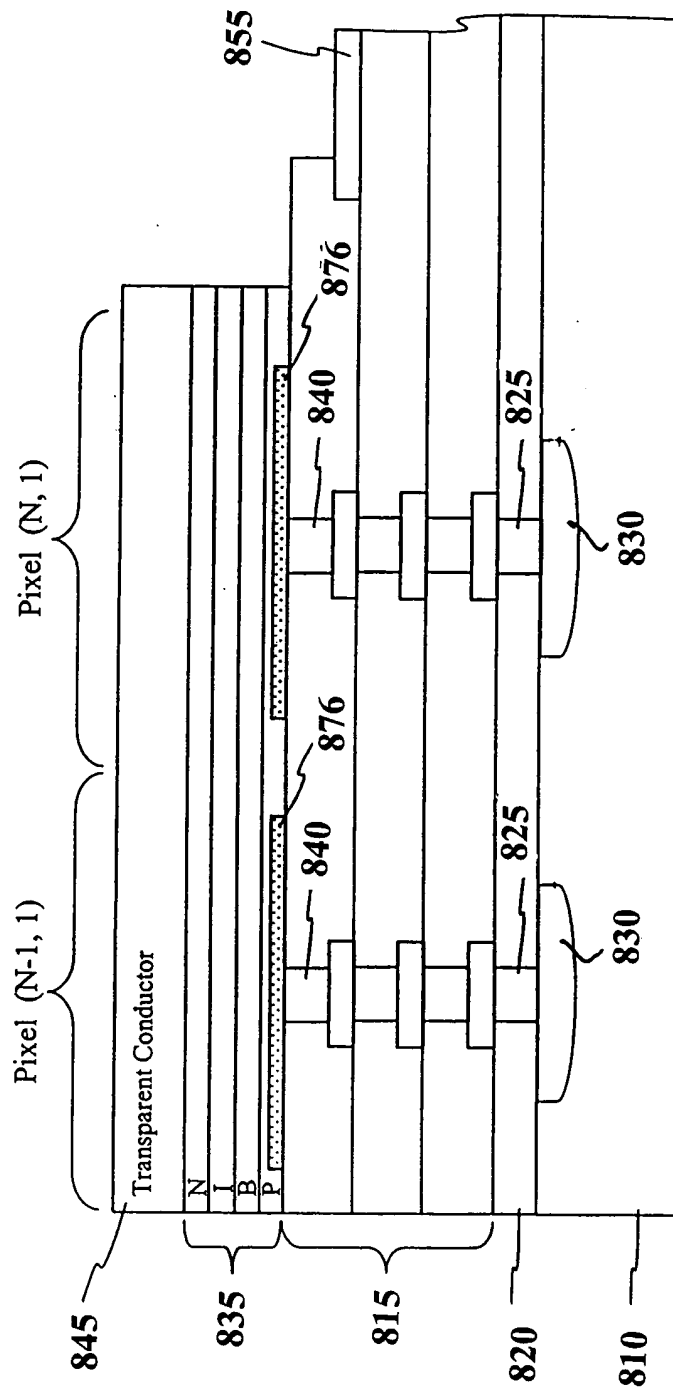


FIG. 18B

NIBP Pixel Cell with Metal Pad (Alternative Design)

1100

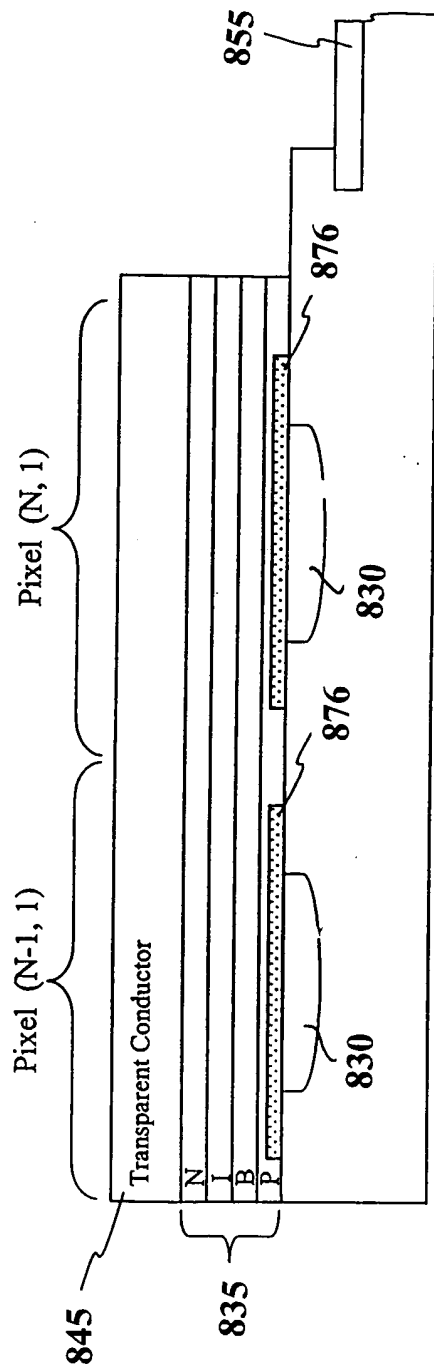


FIG. 18C

POAP Sensor Having A Discontinuous Trench

1150

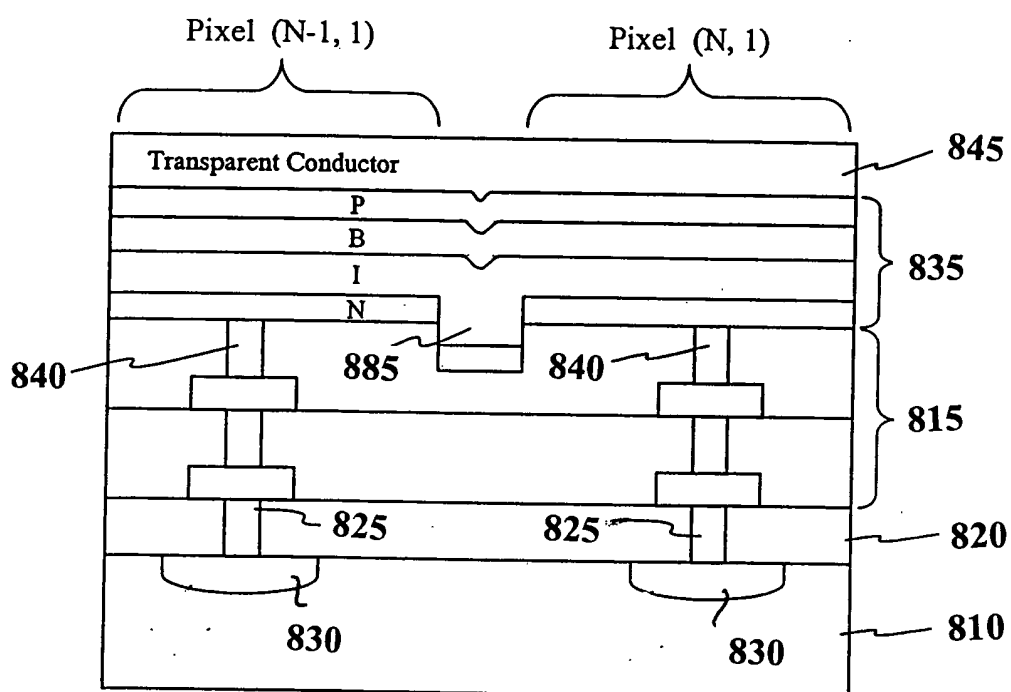
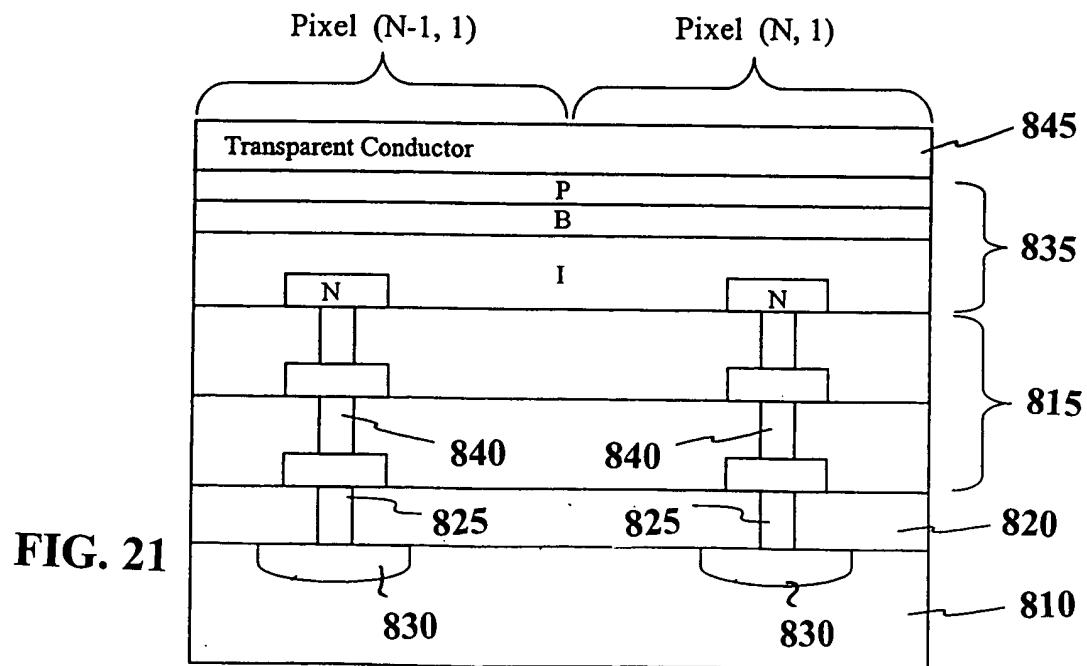
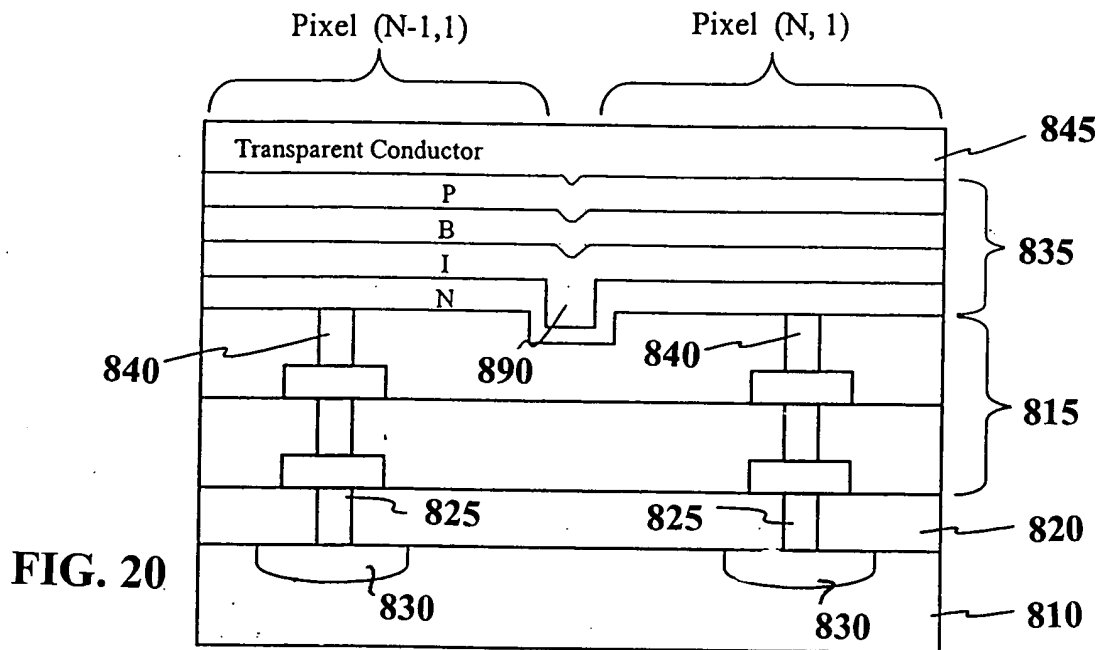


FIG. 19

POAP Sensors Having Trench And Patterned Bottom Layers



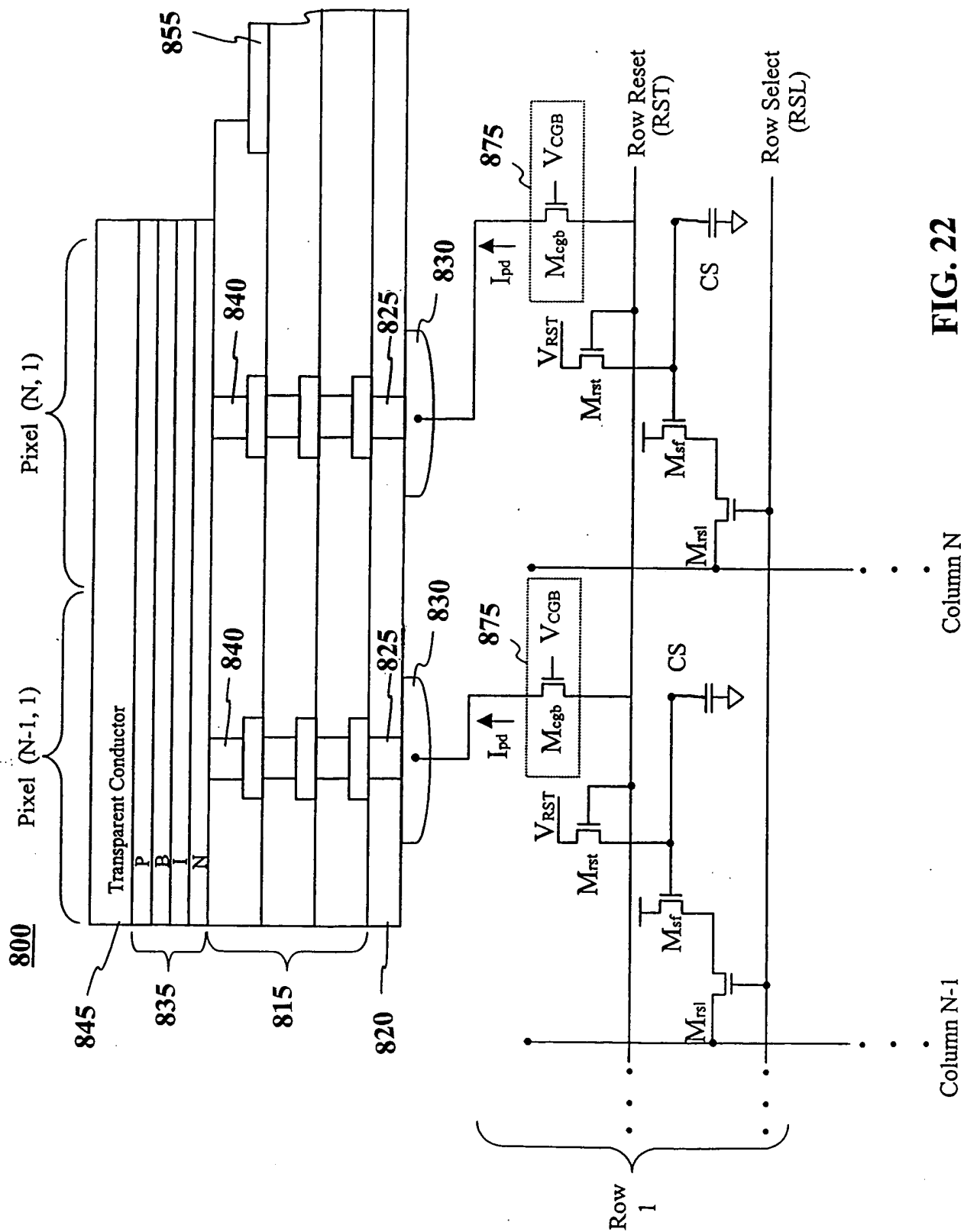


FIG. 22

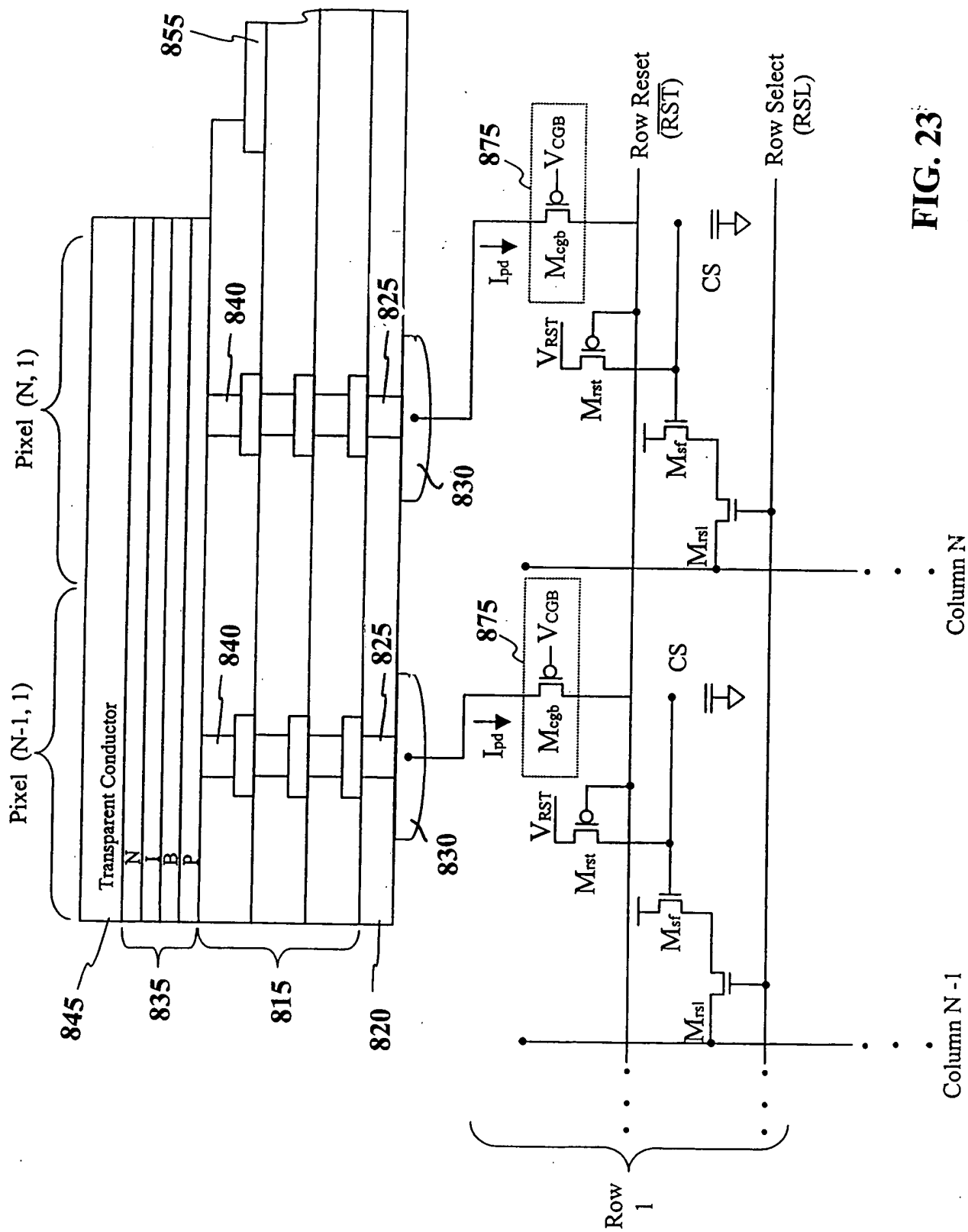


FIG. 23

Individual Pixel Cell Circuitry (Six-Transistor Architecture)

(PBIN Diode)

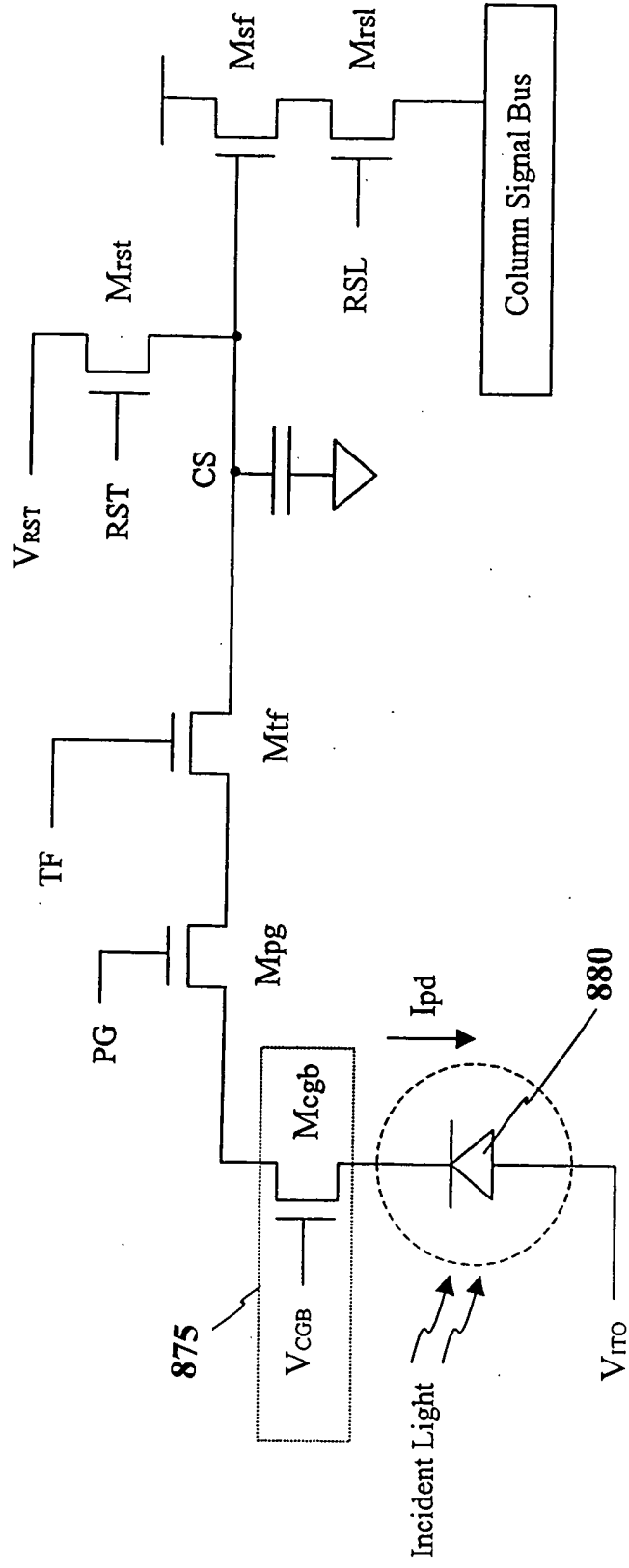


FIG. 24

Individual Pixel Cell Circuitry (Six-Transistor Architecture)

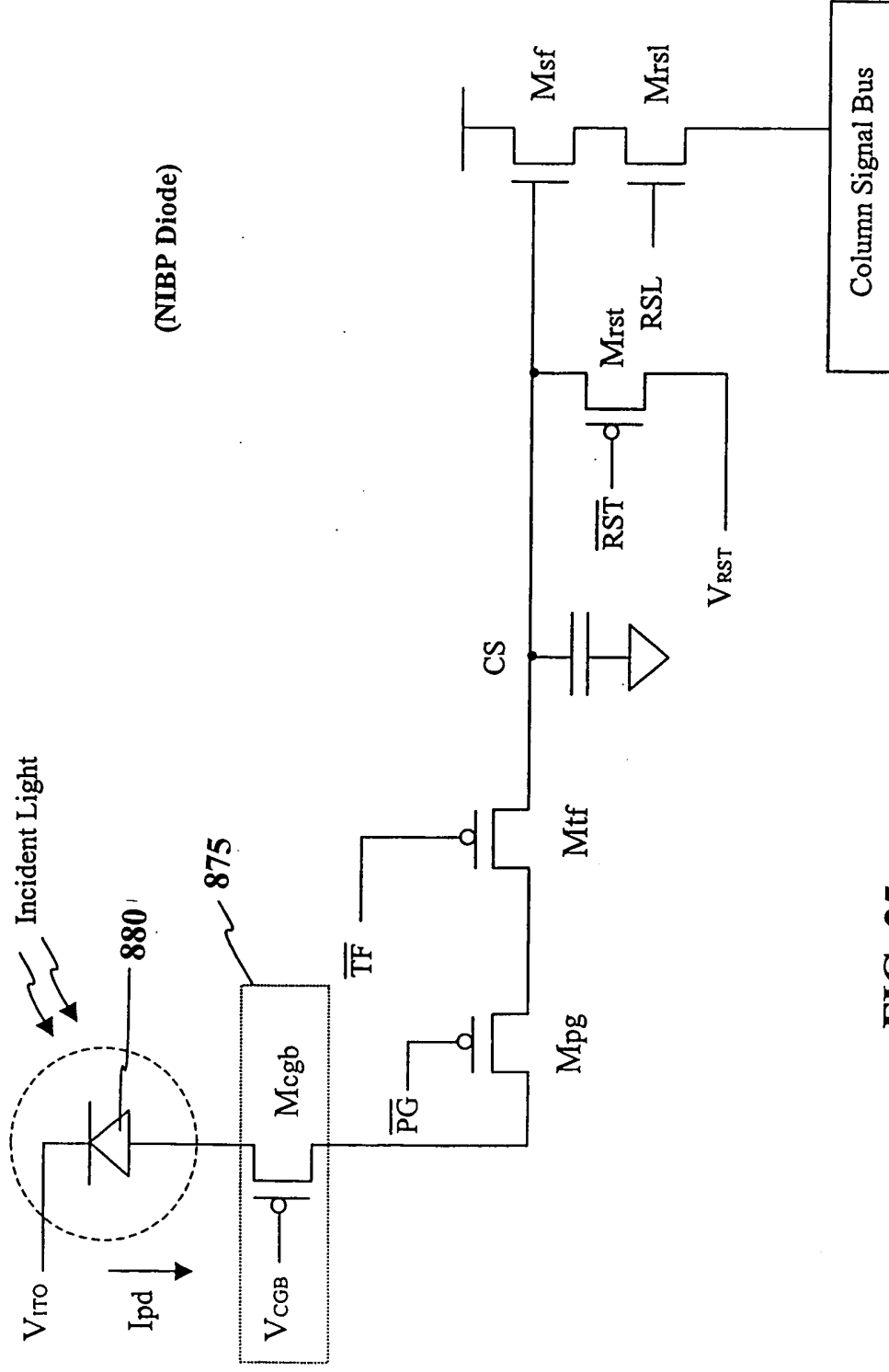


FIG. 25

Individual Pixel Cell Circuitry Without GBT

(PBIN Diode)

FIG. 26

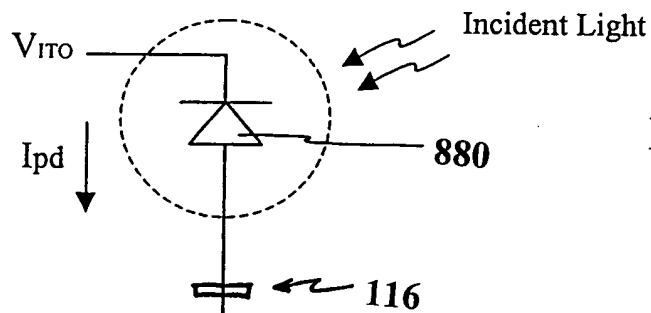
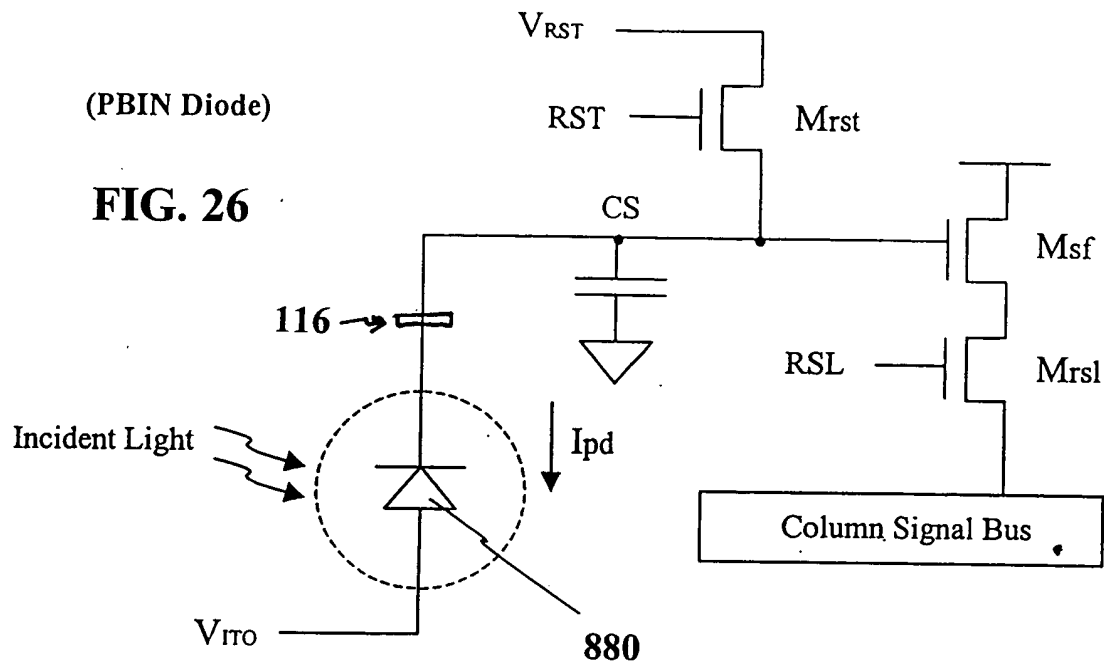
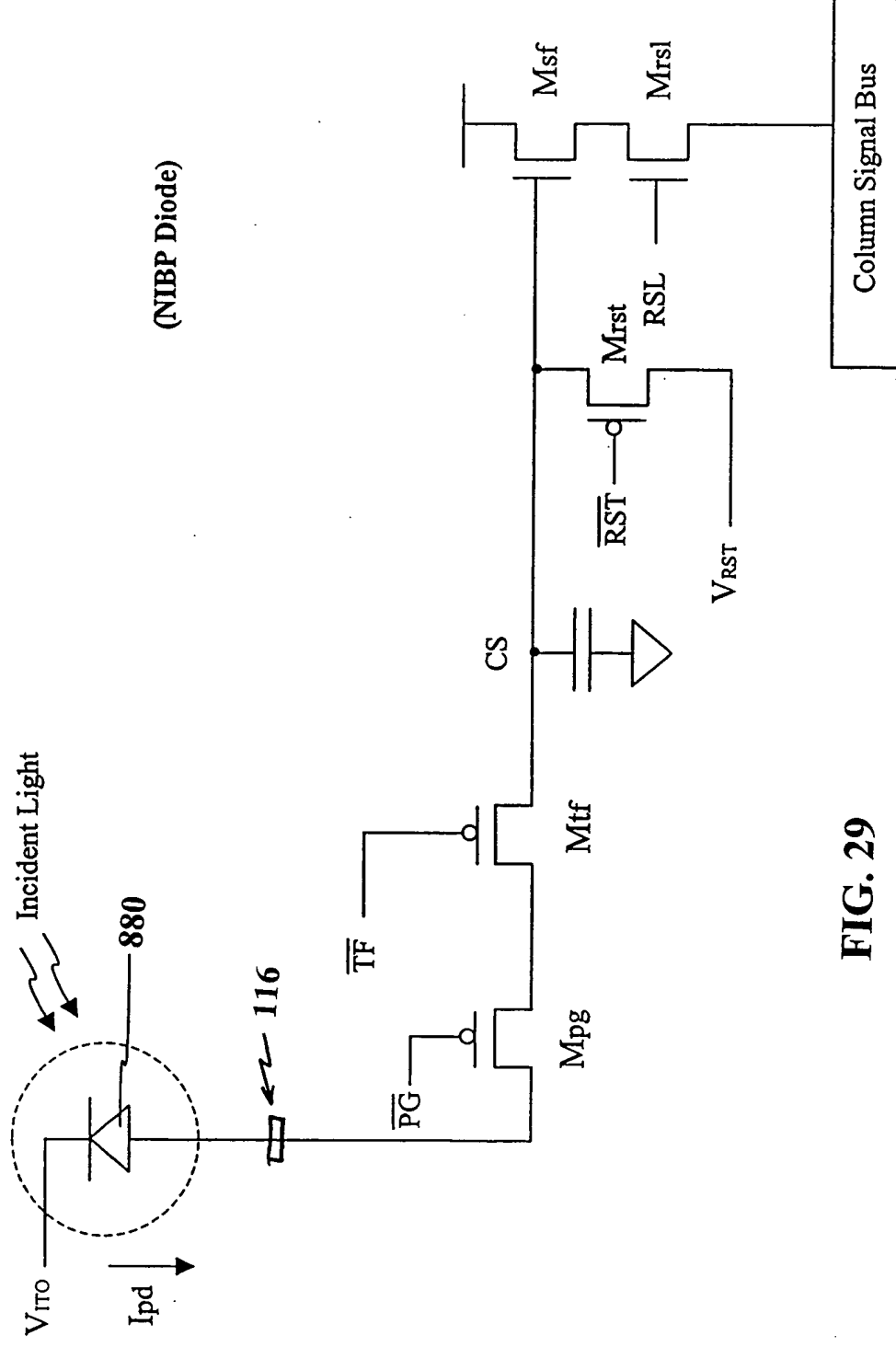


FIG. 27

(NIBP Diode)

Individual Pixel Cell Circuitry Without GBT (Five-Transistor Architecture)



Fabricating A POAP Sensor

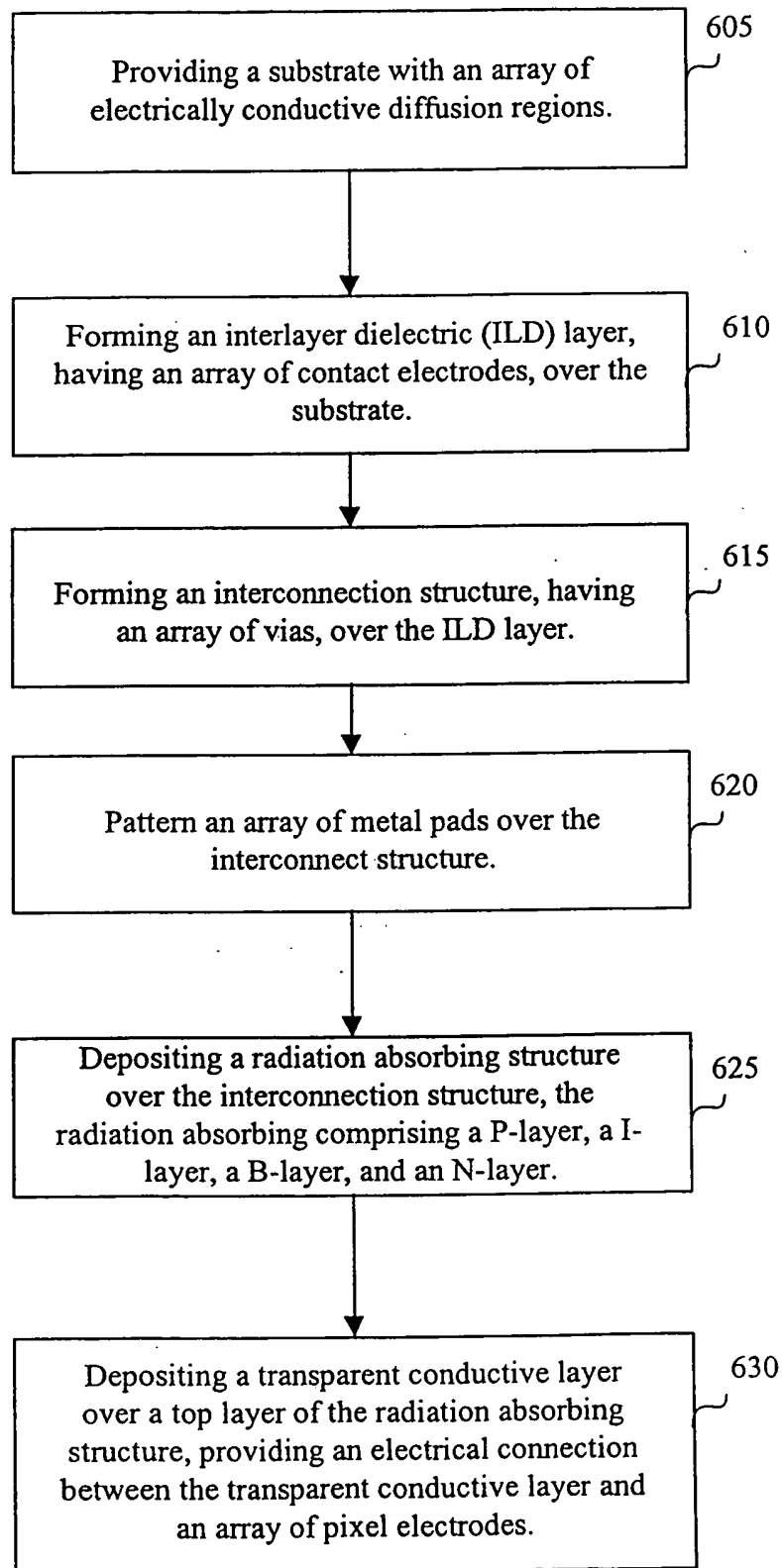


FIG. 30

POAP Sensor Fabrication

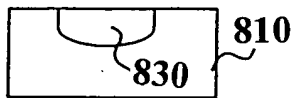


FIG. 31A

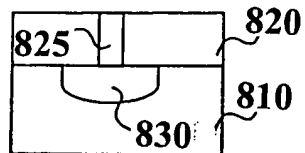


FIG. 31B

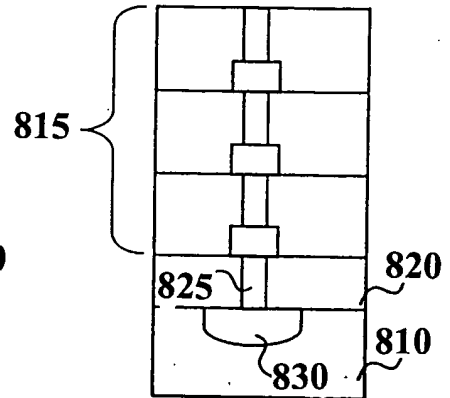


FIG. 31C

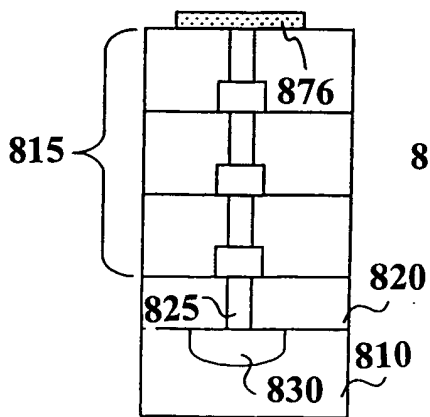


FIG. 31D

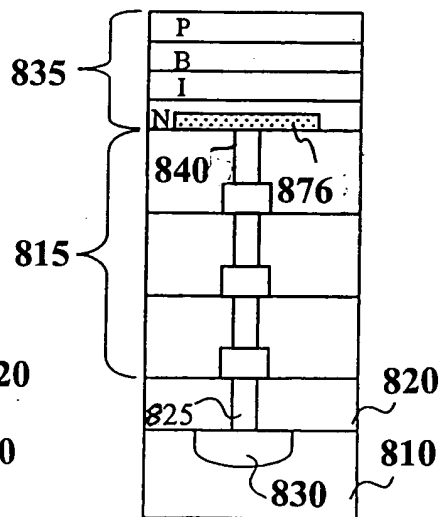


FIG. 31E

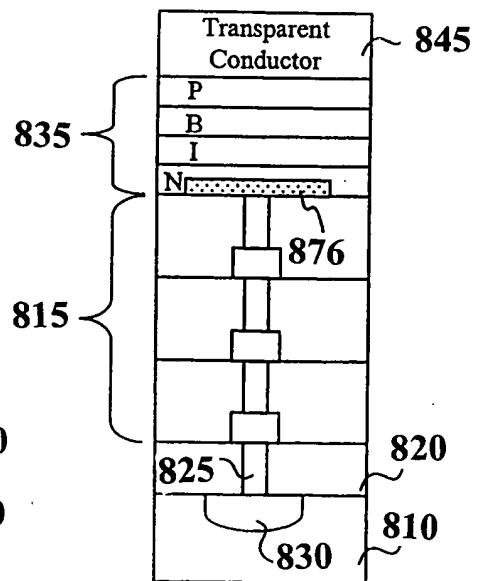


FIG. 31F